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Serial No.: 10/070.622
Art Unit 1731
Response to the Office Action of Feb. 4, 2003

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Previously Amended) Process for the production of surface-finished paper or board ($B_W$), characterized in that an aqueous solution ($L_W$) of a surface-finishing active ingredient (W) is applied to a hydrophilic paper or board sheet (B),

in which (W) consists of

($W_1$) polyethylene glycol with an average molecular weight $\overline{M}_W$ of > 1500 or of ($W_1$) and at least one further additive which is a further finishing additive and/or a formulation additive,

and the paper or board sheet surface-treated with ($L_W$) is fed through smoothing rolls and dried.

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2.(Original) Process according to Claim 1, characterized in that (W) consists of at least 30 % by weight of ($W_1$) and any remainder to 100 % by weight of at least one further of the finishing additives ($W_2$) and ($W_3$) and/or formulation additives ($W_4$), in which

($W_2$) is at least one dye and/or optical brightener,

($W_3$) is at least one wet strength additive

and ($W_4$) is at least one agent for pH adjustment.

3.(Previously Amended) Process according to Claim 1, characterized in that ($L_W$) contains at least one non-finishing formulation additive (F).

4.(Previously Amended) Process according to claim 1, characterized in that ($L_W$) essentially consists of (W) and water .

5.(Previously Amended) Process according to claim 1, at a line pressure of the smoothing rolls in the range of 8 to 500 KN/m.

6.(Previously Amended) Process according to claim 1, characterized in that the paper or board sheet surface-treated with ($L_W$) is calendered.

7. (Withdrawn)

8. (Withdrawn)

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9.(Currently Amended) Paper or board ($B_W$) surface-finished in accordance with ~~any~~ the process of claim 1.

10.(Currently Amended) Paper or board ($B_W$) according to Claim 9 which is essentially size-free and is ~~simultaneously~~ intaglio printing and offset printing paper or board.

11.(Previously Amended) Process for the production of graphically processed paper or board by application of at least one graphic ink pattern to a substrate of paper or board, and drying, characterized in that the substrate used for this purpose is surface-finished paper ($B_W$) or surface-finished board ($B_W$) according to Claim 9.

12.(Original) Process according to Claims 1, characterized in that ($L_W$) essentially consists of (W) and water and at least one non-finishing formulation additive (F).

13.(Original) Process according to Claims 1, wherein (W) consists of ($W_1$) and at least one further finishing additive.

14.(Original) Process according to Claims 1, wherein (W) consists of ($W_1$) and a formulation additive.

15.(Currently Amended) Process ~~according to Claims~~ of claim 1, wherein (W) consists of ($W_1$) and both a further finishing additive and a formulation additive.

16.(Original) Process according to Claim 1, characterized in that the further additives are selected from finishing additives ($W_2$) and ($W_3$) and/or formulation additives ($W_4$), in which

($W_2$) is at least one dye and/or optical brightener,

($W_3$) is at least one wet strength additive

and ($W_4$) is at least one agent for pH adjustment.

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17.(New) A process for the production of surface-finished paper or board ($B_W$), said process comprising

a) forming a paper web (B) from an aqueous pulp suspension comprising water and transporting the paper web to a press section to remove at least a portion of the water from the paper web to provide a hydrophilic paper or board sheet having a water content of less than or equal to 30 weight percent;

b) applying to a surface of the hydrophilic paper or board sheet (B) an aqueous solution ($L_W$) which consists of a polyethylene glycol ($W_1$) having an average molecular weight greater than 1500 or said polyethylene glycol and a further additive selected from the group consisting of a water soluble dye, an optical brightener, a wet strength additive, an agent for pH adjustment, a non-finishing additive, and mixtures thereof to provide a surface-treated paper or board sheet; and,

c) passing the surface-treated paper or board sheet to a smoothing roll zone and therein subjecting the surface treated paper or board sheet to pressure and drying to provide the surface-finished paper or board sheet.

18.(New) The process of claim 17 wherein the aqueous solution consists of the polyethylene glycol and a water soluble dye and/or an optical brightener, wherein the polyethylene glycol has an average molecular weight of between 1600 and 4000.

19.(New) The process of claim 17 wherein the aqueous solution consists of the polyethylene glycol and a wet strength additive and/or an optical brightener, wherein the polyethylene glycol has an average molecular weight of between 2000 and 20,000.

20.(New) A process for the production of surface-finished paper or board, said process comprising

a) passing a hydrophilic paper or board sheet to a re-wetting zone and therein moistening the hydrophilic paper or board sheet to a moisture content from 4 to 16 % by weight to provide a re-moistened sheet;

b) applying uniformly to a surface of the re-moistened sheet an aqueous solution ($L_W$) which consists essentially of a polyethylene glycol ($W_1$) having an average molecular weight greater than 1500 or said polyethylene glycol and a further additive selected from the group consisting of a water soluble dye, an optical brightener, a wet strength additive, an agent for pH adjustment, a non-finishing additive, and mixtures thereof to provide a surface-treated paper or board sheet; and,

c) passing the surface-treated paper or board sheet to a smoothing roll zone and therein subjecting the surface treated paper or board sheet to pressure and drying to provide the surface-finished paper or board sheet.

21.(New) The process of claim 20 wherein the moistening in the re-wetting zone comprises contacting the hydrophilic paper or board sheet with water or with a re-moisturizing solution comprising water and from 0.01 to 10 % by weight of a polyethylene glycol having an average molecular weight greater than 1500.

22.(New) The process of claim 20 wherein the smoothing roll zone comprises calendering.